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EXAMINER

STRICKLAND, JONAS N

ART UNIT

PAPER NUMBER

1754

DATE MAILED: 03/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

09/992,285

Applicant(s)

WIERES, LUDWIG

Examiner

Jonas N Strickland

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4,6,8-10,12,13,15,16,18 and 19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 4, 6, 8-10, 12, 13, 15, 16, 18, and 19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. This Office Action is in response to the amendment filed on 12/19/02 as Paper No. 4. Claims 2, 3, 5, 7, 11, 14, 17, and 20 have been cancelled. Claims 1, 4, 6, 8-10, 12, 13, 15, 16, 18, and 19 are currently pending. Claims 8, 9, 12, 15, and 18 have been amended. The claim objections and the 35 U.S.C. 112 2nd paragraph rejection in the previous Office Action has been withdrawn in view of Applicant's amendments and remarks.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 4, 6, 8-10, 12, 13, 15, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sheller (US Patent 5,422,083) in view of Aggen et al. (US Patent 4,414,023).

Sheller discloses metal monolith converter used in the exhaust lines of motorcycles, as well as the internal combustion engine of automobile vehicles (col. 1, lines 8-27). The metal layers are comprised of stainless steel, comprised of 16% chromium, 4.5% aluminum, and one or more of rare earth metals (col. 2, lines 47-67). The stainless steel has a thickness of 0.22 mm and has a passage of between 50 cpsi to 800 cpsi (col. 4, lines 36-51). However, Sheller does not disclose having an

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aluminum content in percent by weight of between 6 and 12%, as well as the weight percentage of the rare earth metal. Furthermore, Sheller does not disclose wherein honeycomb bodies are used for the honeycomb bodies for the cleaning of exhaust gas of a diesel engine in a diesel vehicle.

Aggen et al. teaches a hot workable stainless steel alloy, which consists of 8.0-25% of chromium, 3.0-8.0% by weight of aluminum, and up to 0.05% by weight of a rare earth metal, such as cerium, and lanthanum (col. 3, lines 14-30). Aggen et al. continues to teach wherein such an alloy is useful in catalytic systems and converters for automobiles (col. 18, lines 32-44). Aggen et al. continues to teach wherein the metallic catalytic substrate can be fabricated into honeycomb configurations to provide greater surface area and lighter weight (col. 1, lines 36-43).

Therefore, it would have been obvious to one of ordinary skill in the art, to modify the teachings of Sheller based on the teachings of Aggen et al. to have an aluminum content in percent by weight of between 6 and 12%, as well as the weight percentage of the rare earth metal, because Aggen et al. teaches a hot workable stainless steel alloy, which is useful in catalytic systems and converters for automobiles which consists of 8.0-25% of chromium, 3.0-8.0% by weight of aluminum, and up to 0.05% by weight of a rare earth metal, such as cerium, and lanthanum. Such modification would have been obvious to one of ordinary skill in the art, because one of ordinary skill in the art would expect a layer formed of stainless steel comprised of chromium, aluminum, and a rare earth metal, used in catalytic systems to be similarly useful and applicable to a carrier

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formed of stainless steel, comprised of chromium, aluminum, and rare earth metals as taught by Sheller.

4. Claims 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sheller (US Patent 5,422,083) in view of Aggen et al. (US Patent 4,414,023) as applied to claims 1, 4, 6, 8-10, 12, 13, 15, and 19 above, and further in view of Sato et al. (EP 0497992 A1).

Applicant claims with respect to claims 16 and 18, wherein the sheet metal layers are rolled and removed from a production process for producing hot-dip aluminized material before the aluminum content is raised.

The teachings of Sheller and Aggen et al. have been discussed with respect to claims 1, 4, 6, 8-10, 12, 13, 15, and 19. Aggen et al. teaches rolling the sheet metal layers, but does not teach removing from a production process for producing hot-dip aluminized material before an alumina content is raised (col. 3, lines 35-43).

However, Sato et al. teaches a stainless steel roll for automobile exhaust gas purifying catalyst carrier, which is a cold-rolled rapidly solidified steel foil comprised of 1 to 20% by weight of Al, 5 to 30% by weight of Cr, as well as rare earth metals. Sato et al. continues to teach as the aluminum content is increased the rolling workability of stainless steel becomes much poorer, and the content of Al which will effectively improve the oxidation resistance must be limited (p. 2, lines 39-46).

Therefore, it would have been obvious to one of ordinary skill in the art to modify the teachings of Sheller in view of Aggen, based on the teachings of Sato et al., by removing an aluminized material after rolling, because Sato et al. teaches that it is

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beneficial to remove the aluminized material after rolling, so that the aluminum content would not rise and effect the oxidation resistance of the stainless steel. Such modification would have been obvious to one of ordinary skill in the art, because one of ordinary skill would expect a stainless steel foil for an automobile exhaust gas purifying catalyst comprised of aluminum, chromium, and a rare earth metal as taught by Sato et al to be similarly useful and applicable to the stainless steel layers used in catalytic systems of automobiles comprised of aluminum, chromium, and rare earth metals as taught by Sheller and Aggen et al.

Response to Arguments

5. Applicant's arguments filed 12/19/02 have been fully considered but they are not persuasive.

Applicant argues that Sheller does not teach the change of aluminum content depending on the thickness of the sheet metal layer, because the thickness of thin metal strips disclosed by Sheller have the same composition, instead of a composition that changes based on the thickness of the sheet metal layer. Applicant continues to argue that Sheller contains no suggestion or hint to use a composition of alloy, which is dependent on the thickness of the sheet metal layer.

Sheller clearly discloses metal layers comprised of stainless steel, comprised of 16% chromium, 4.5% aluminum, and one or more of rare earth metals (col. 2, lines 47-67). The stainless steel has a thickness of 0.22 mm and has a passage of between 50 cpsi to 800 cpsi (col. 4, lines 36-51). Aggen et al. teaches a hot workable stainless steel alloy, which consists of 8.0-25% of chromium, 3.0-8.0% by weight of aluminum, and up

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to 0.05% by weight of a rare earth metal, such as cerium, and lanthanum (col. 3, lines 14-30). Aggen et al. continues to teach wherein the metallic catalytic substrate can be fabricated into honeycomb configurations to provide greater surface area and lighter weight (col. 1, lines 36-43). Therefore, it is held based on the teachings of Sheller in view of Aggen et al. that the change of aluminum content based on the thickness of the sheet metal layer is a result effective variable, a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation. In re Antonie, 559F. 2d 618, 195 USPQ 6 (CCPA 1977). Sheller et al. clearly discloses the thickness of the sheet metal layer and Aggen et al. teaches the aluminum content used in a honeycomb configuration.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the lower temperatures of the exhaust gas, which allow for the lowering of the aluminum content of the steel being used, which has an impact on the resistance to high-temperature corrosion of the material) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonas N Strickland whose telephone number is 703-306-5692. The examiner can normally be reached on M-TH. 7:30-5:00, off 1st Friday.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on 703-308-3837. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.


Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-0661.

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Jonas N. Strickland
February 20, 2003


WAYNE A. LANGEL
PRIMARY EXAMINER